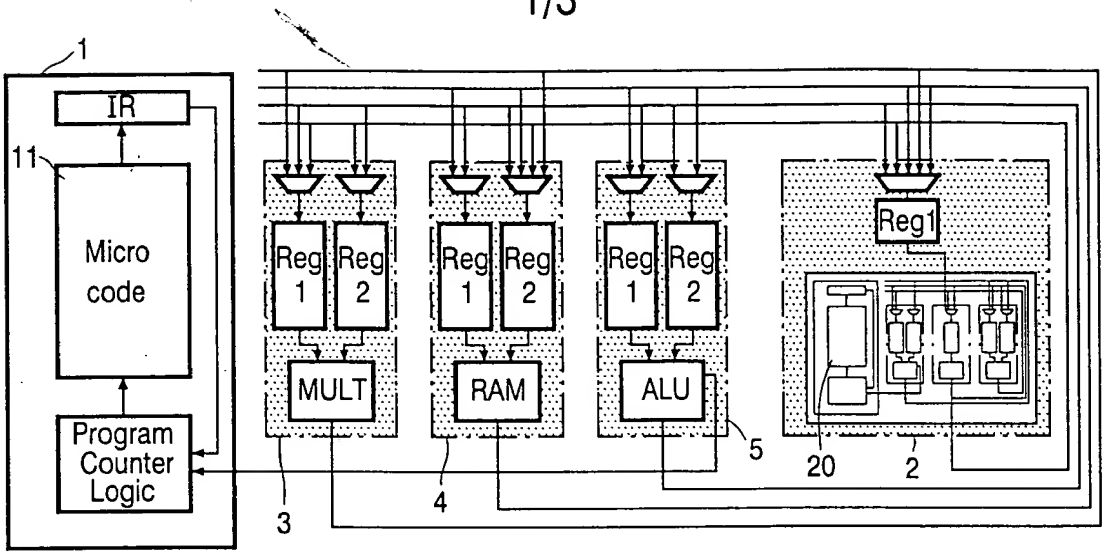


FIG. 1

```
(X,Y) = 2Dtransform (int x,y)
{
  X = 2*y + 3;
  Y = 5*x + 2*y + 1;
}
```

FIG. 2

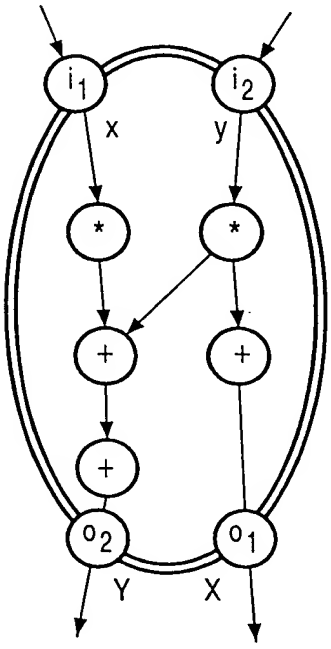
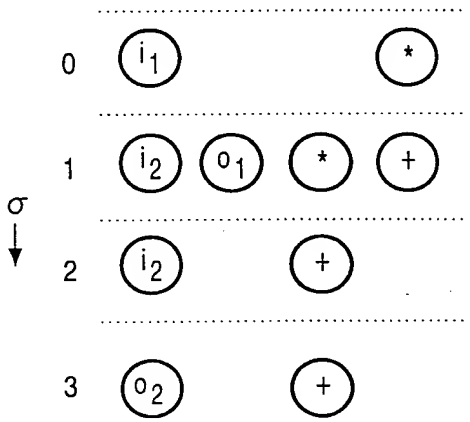


FIG. 3a



$\sigma(i_1) = 0 \quad \sigma(i_2) = 1$

$\sigma(o_1) = 1 \quad \sigma(o_2) = 3$

FIG. 3b

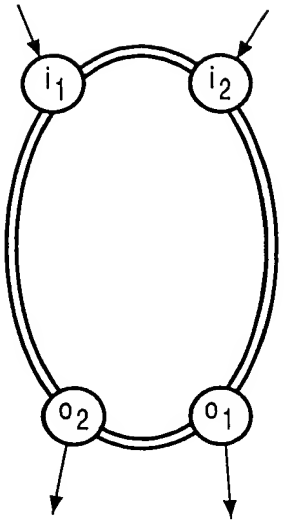


FIG. 4a

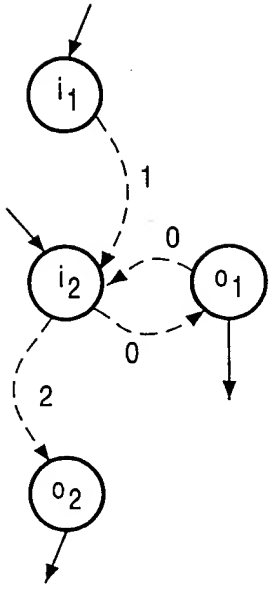


FIG. 4b

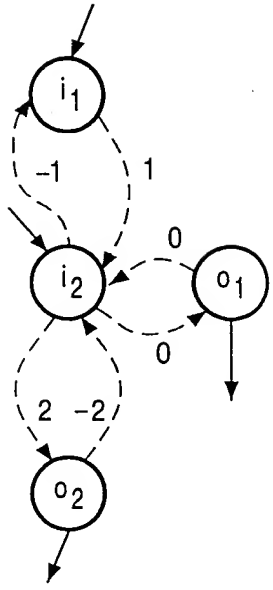


FIG. 4c

```
for (p=0; p<P_MAX; p++) {
   for (q=0; q<Q_MAX; q++) {
        x = p + q;
        y = p -q -2;
        (X, Y) = 2Dtransform (x, y);
        cond = ((X^2 + Y^2 - 100 ) < 0 )
   }
}
```

FIG. 5

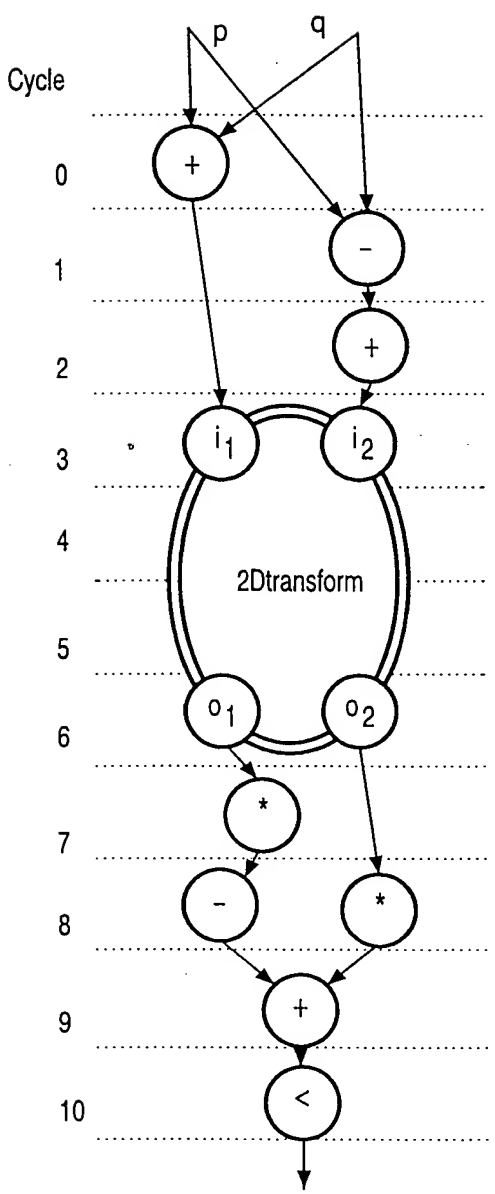

Cycle
p
q
0
1
2
3
4
5
6
7
8
9
10
+
-
+
i_1
i_2
2Dtransform
o_1
o_2
*
-
*
+
<

FIG. 6a

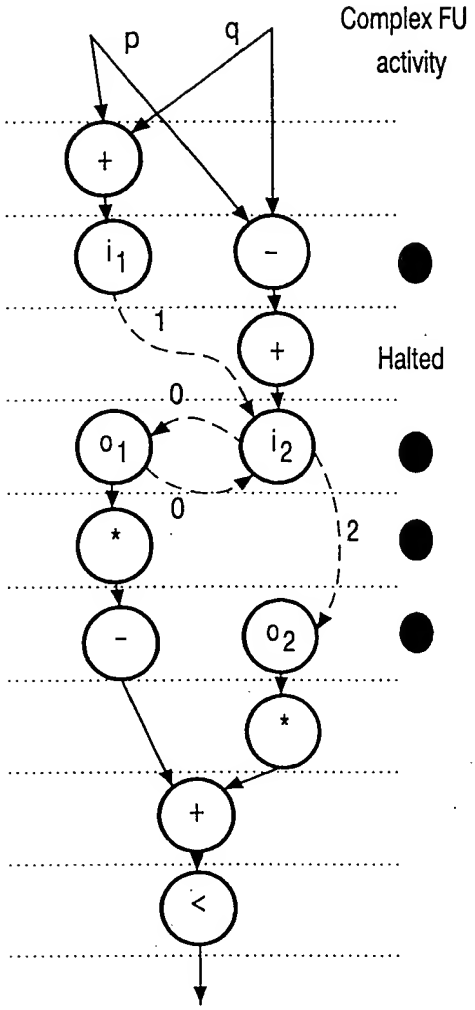

p
q
Complex FU activity
+
i_1
-
1
+
Halted
0
o_1
i_2
0
*
2
-
o_2
*
+
<

FIG. 6b